

ABSTRACT:

An *in vitro* assay for quantifying the osteogenic capacity of bone implants involves *in vitro* isolation and quantitation of specific osteogenic factors. The method disclosed
5 permits direct measurement of the osteogenic capacity of an implant to allow greater predictability of the degree to which new bone will grow in a given area. The method eliminates the need to practice the traditional technique of implanting material into a test animal and subsequently sacrificing the animal to assess bone growth associated with the implant. Since the present method does not involve animal testing, it is an extremely
10 reproducible, rapid, and accurate method for predicting whether an implanted composition or material will induce bone growth without the need for *in vivo* assays.

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